

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

**1. (currently amended):** A compound that binds to leukocytes, wherein said compound is represented by the formula (1):



(wherein, in the formula (1), Z represents a protecting group for an amino group; Y represents Met or Nle; in  $(X)_n$ , X represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds, and n represents 1 or 0; in  $(\text{NH}_2)_m$ ,  $\text{NH}_2$  represents an amide group as a protecting group for a carboxyl group in the  $\alpha$  position of Lys, and m represents 1 or 0; in  $\varepsilon(-R-(T)l-U)$ , R represents Ser or Thr binding to an  $\varepsilon$ -amino group of Lys through an amide bond, T represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds, l represents 1 or 0, and U represents a group which can be labeled with a metal; with the proviso that said X and T may be the same or different from each other).

**2. (currently amended):** The compound binding to leukocytes according to claim 1, wherein U in the formula (1) is a group consisting of a peptide represented by -Cys-A1-A2 (A1 and A2 are each an amino acid except for Cys and Pro), nitrogen-containing cyclic compounds with 8 to 20 carbon atoms, nitrogen-containing cyclic carboxylic acid compounds with 8 to 20

AMENDMENT AND RESPONSE  
TO ELECTION OF SPECIES  
U.S. PATENT APPLICATION NO.: 10/528,771

Attorney Docket No.: Q86824

carbon atoms, derivatives of nitrogen-containing cyclic carboxylic acid compounds with 8 to 20 carbon atoms or alkyleneamine carboxylic acids with 4 to 10 carbon atoms, which can be labeled with a metal.

**3. canceled**

**4. (currently amended):** The compound ~~binding to leukocytes~~ according to claim 1, wherein said compound represented by the formula (1) is one selected from the group consisting of:

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-Cys-Gly-Asn);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-Cys-Gly-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-Asp-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-1,4,8,11-tetraazacyclotetradecane-1,4,8,11-tetraacetic acid);

formyl-Nle-Leu-Phe-Lys(NH<sub>2</sub>)-ε-(Ser-D-Ser-Asn-D-Arg-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-diethylenetriamine pentaacetic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-1,4,8,11-tetraazacyclotetradecane-butryric acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-Asp-1,4,8,11-tetraazacyclotetradecane-butryric acid);

AMENDMENT AND RESPONSE  
TO ELECTION OF SPECIES  
U.S. PATENT APPLICATION NO.: 10/528,771

Attorney Docket No.: Q86824

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Ser-Asn-1,4,8,11-tetraazacyclotetradecane-butryric acid);  
acetyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-Asp-Cys-Asp-Asp);  
carbamyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-Asp-Cys-Asp-Asp); and  
methyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-Asp-Cys-Asp-Asp).

**5. (currently amended):** ~~A medicinal composition containing said~~ The compound binding to leukocytes according to claim 1 ~~in-labeled-state~~ with a radioactive metal or a paramagnetic metal as the active ingredient.

**6. (currently amended):** ~~The compound~~ medicinal composition according to claim 5, wherein said radioactive metal is Tc-99m, In-111, Ga-67, CU-64 or Ga-68.

**7. (currently amended):** ~~The medicinal composition according to claim 6, wherein said composition is used in SPECT or PET image diagnosis~~ A method for imaging a site of vigorous leukocytes infiltration accompanied by immune reaction in an individual, said method comprising administering to an individual an effective amount of the compound according to claim 6 and conducting SPECT or PET imaging on the individual.

**8-9. Canceled**

**10. (currently amended):** ~~The compound~~ medicinal composition according to claim 5, wherein said paramagnetic metal is Gd, Fe, Mn or Cu.

**11. (currently amended):** ~~The medicinal composition according to claim 10, wherein said composition is used in MRI image diagnosis~~ A method for imaging a site of vigorous leukocytes infiltration accompanied by immune reaction in an individual, said method

AMENDMENT AND RESPONSE  
TO ELECTION OF SPECIES  
U.S. PATENT APPLICATION NO.: 10/528,771

Attorney Docket No.: Q86824

comprising administering to said individual an effective amount of the compound according to claim 10 and conducting MRI imaging on the individual.

**12. (currently amended):** The ~~compound medicinal composition~~ according to claim 5, wherein said radioactive metal is Y-90, Sn-117m, Sm-153, Re-186 or Re-188.

**13. (currently amended):** A method of radiotherapy, comprising administering to a patient in need of therapy an effective amount of the compound ~~The medicinal composition~~ according to claim 12, ~~wherein said composition is used for the radiotherapy.~~

**14. (currently amended):** The compound ~~binding to leukocytes~~ according to claim 2, wherein said compound represented by the formula (1) is one selected from the group consisting of:

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-Cys-Gly-Asn);  
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-Cys-Asp-Asp);  
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-Cys-Gly-Asp);  
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-Asp-Cys-Asp-Asp);  
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-1,4,8,11-tetraazacyclotetradecane-1,4,8,11-tetraacetic acid);  
formyl-Nle-Leu-Phe-Lys(NH<sub>2</sub>)-ε-(Ser-D-Ser-Asn-D-Arg-Cys-Asp-Asp);  
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-D-Arg-diethylenetriamine pentaacetic acid);  
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(Ser-1,4,8,11-tetraazacyclotetradecane-butric acid);

AMENDMENT AND RESPONSE  
TO ELECTION OF SPECIES  
U.S. PATENT APPLICATION NO.: 10/528,771

Attorney Docket No.: Q86824

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(-Ser-D-Arg-Asp-1,4,8,11-tetraazacyclotetradecane-butyric acid);  
formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(-Ser-D-Ser-Asn-1,4,8,11-tetraazacyclotetradecane-butyric acid);  
acetyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp);  
carbamyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp); and  
methyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH<sub>2</sub>)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp).

**15. (new):** A composition comprising the compound of any one of claims 5, 6, 10, or 12, and a pharmaceutically acceptable carrier.